

REMARKS

The present after-final amendment places the application in condition for allowance or at least in better form for appeal. Accordingly, entry of the present after-final amendment is respectfully requested.

The undersigned thanks the examiner for the courtesies extended during the in-person interview of 6 February 2008 during which the merits of the office action of 29 November 2007 were discussed.

Claims 1-41 are pending. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

Claim 38 has been objected to due to informalities. Particularly, the examiner has asserted that claim 38 lacks proper antecedent basis for “the criteria” and should not depend from claim 19. Although, claim 38 does not recite “the criteria,” the applicants have amended claim 38 to depend from claim 36 and correct a grammatical error. Accordingly, the objection to claim 38 should be withdrawn.

Claims 10, 17, 26, 40 and 41 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Particularly, it was asserted that the recited “third IF signal path and fourth IF signal path” are not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. The applicants respectfully request that this rejection be withdrawn for the following reasons.

The applicants have amended claims 10, 17, 26, 40 and 41 to recite that the IF splitters split the first path into a first IF signal path and a first detection path, and split the second path into a second IF signal path and a second detection path. This limitation is essentially the same

as the previous version of these claims, with the exception of the names assigned to the paths split from each of the splitters. As discussed on, for example, paragraph [0027], gain control is applied on IF paths IF1 333 and IF2 334 using AGC control circuits 303 and 304. As discussed on, for example, paragraph [0026], the processor 314 detects the presence of an IF signal on detection paths DET1 and DET2 332. Further, as discussed in paragraph [0025], IF splitters 317 and 318 split the signal paths from the RF splitter 316. Moreover, Fig. 2 clearly shows the paths 331-334 output from IF splitters 317, 318.

Therefore, because claims 10, 17, 26, 40 and 41 are described in the specification, it is respectfully requested that the rejection of claims 10, 17, 26, 40 and 41 should be withdrawn. Further, because the amended claims recite essentially if not entirely the same limitations as the previous version of the claims, the amendments do not raise a new issue.

Claims 1-2, 4-14, 15-17, 22-23, 30-35 and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,404,775 to Leslie *et al.* (hereafter: "Leslie") in view of U.S. Patent Publication No. 2004/0110469 to Judd *et al.* (hereafter: "Judd"). The applicants respectfully request that this rejection be withdrawn for the following reasons.

As conceded by the examiner, Leslie fails to disclose all of the limitations of claim 1, particularly, a repeater including a delay circuit configured to add a delay to the signal to compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval. The examiner has cited Judd in order to cure the deficient teachings of Leslie.

Judd describes a repeater including an automatic gain control feature for adjusting the gain of amplifiers and monitoring for undesired feedback (see paragraph [0199]). Judd also

describes a repeater system including filter elements 12a, 12b and an amplifier 128. A feedback signal $f(t)$ is transmitted back to the receive antenna.

However, Judd fails to teach or suggest the recited delay circuit configured to add a delay to the signal to compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval. In Figs. 24, 44 and 75, no delay is described. Nor can the filters 126a, 126b be considered a delay circuit because the filtering does not compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval. Rather, the filtering is performed before and after being amplified at 128. The applicants respectfully request the examiner point out how the repeater in Judd can plausibly compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval when the filtering is performed prior and subsequent to amplification. Further, there is no teaching of a signal detection interval or a transmitter configuration interval.

Therefore, because Leslie and Judd fail to teach or suggest a delay circuit configured to add a delay to the signal to compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval, it is respectfully requested that the rejection of claims 1, 11 and 39 under 35 U.S.C. 103(a) be withdrawn.

Claims 2 and 4-14 depend from claims 1 and 11. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to claims 1 and 11.

Claim 15 recites the novel embodiment of a frequency translating repeater comprising: *inter alia* a delay circuit configured to add a delay to the IF signal to compensate for a signal detection interval and a transmitter configuration interval.

The examiner has asserted that the buffer 548 of Leslie discloses the recited delay circuit. However, the buffer 548 does not receive an IF signal, nor does it compensate for a signal

detection interval and a transmitter configuration interval. Rather, the buffer 548 receives a demodulated signal from demodulator 630. The buffer 548 buffers voice signals to accommodate differences between the rate at which data is supplied by the demodulator and the rate at which data is consumed by the modulator. Demodulator and modulator data supply and consumption do not constitute a signal detection interval and a transmitter configuration interval as recited in claim 15.

Therefore, because Leslie fails to teach or suggest a delay circuit configured to add a delay *to the IF signal* to compensate for *a signal detection interval and a transmitter configuration interval* it is respectfully requested that the rejection of claim 15, as well as dependent claim 16, under 35 U.S.C. 103(a) be withdrawn.

Claim 17 was indicated as being rejected as being unpatentable over Leslie in view of Judd, yet no explanation for the basis for the rejection has been presented. The applicants assume that this was a typographical error.

Claims 22, 30 and 34 recite adding a delay to the signal to equivalent to or compensate for a signal detection interval and a transmitter configuration interval. Although Leslie and Judd describe filtering a signal, both fail to teach or suggest adding a delay to the signal to equivalent to *a signal detection interval and a transmitter configuration interval*. Accordingly, the rejection of claims 22, 30 and 34, as well as dependent claims 23, 31-33 and 35, under 35 U.S.C. 103(a) should be withdrawn.

Claims 3, 10, 17-21, 24-29, 33, 36-38 and 40-41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leslie in view of Judd, and in further view of U.S. Patent No. 6,285,863 to Zhang. The applicants respectfully request that this rejection be withdrawn for the following reasons.

Claim 3 depends from claim 1. Therefore, the rejection of claim 3 should be withdrawn for the above-mentioned reasons with respect to claim 1.

Claims 10, 17, 26, 40 and 41 recite *inter alia* the novel embodiment described, for example, on pgs. 12-14 in which the repeater includes an RF splitter for splitting the first signal received by the antenna onto a first path and a second path; IF splitters 317, 318 disposed on the first and second paths, respectively for splitting the first and second signals into multiple IF signals, and the detector circuit and the gain control circuit are located on specified IF signal paths and the delay circuit 307 -310 is located on the different IF signal paths. Accordingly, the repeater 200 can be configured to simultaneously detect and process two different frequency signals, and separately delay and control the two different frequency paths.

Leslie and Judd fail to teach or suggest splitting an RF signal into multiple IF signals, and performing detection and gain control on certain IF signals and delay on different IF signals. The examiner has cited Zhang in order to cure the deficient teachings of Leslie and Judd.

Zhang describes a receiver including an automatic gain control (AGC) system in which a down-converter 103 generates an IF signal which includes a plurality of channels. Zhang describes a power splitter 109 that divides the IF power to a demodulator 110 and to an IF sensor and signal generator 107 to provide a feedback control of the gain of the gain variable amplifier 106 (see col. 1, line 45 - col. 2, line 5). However, although the splitter 109 divides the IF power, the detector circuit and the gain control circuit are not located on detection paths from the splitter and the delay circuit 307 -310 are not located on the IF signal paths.

Zhang also describes including an open loop circuit 200 including a plurality of IF processing paths between switches 201 and 202 through which the IF input to the open loop of the AGC may be directed to the GVA 106. Path P1 includes an attenuator 203. Path P2 includes

no processing. Path P3 includes an IF amplifier 204. However, here, the paths P1-P3 are not formed by an IF splitter as recited in, for example, claims 10 and 17. Rather, the paths are created by switch 201, which only permits a signal to flow through a single one of paths P1, P2 and P3 (see col. 7, lines 1-4). That is, Zhang fails to recite splitting an RF signal into *multiple* IF signals, and performing detection and gain control on certain IF signals and delay on different IF signals. Accordingly, the rejection of claims 10, 17, 26, 40 and 41 should be withdrawn.

Claims 18-21 depend from claim 17. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to claim 17.

Claims 24-25 depend from claim 22. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to claim 22.

Claims 27-29 depend from claim 26. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to claim 26.

Claims 36-38 depend from claim 35. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to claim 35.

The applicants reiterate that the above-amendments do not add new limitations that raise new issues necessitating a new search. Further, the amendments correct formal matters such as the objection and the rejection under 35 U.S.C. 112, first paragraph, thus simplifying issues for appeal should the examiner not be persuaded by the above arguments. Accordingly, entry of the present amendment is respectfully requested.

In view of the foregoing, the applicants submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kerry S. Culpepper", written over a horizontal line.

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